

which is taken into account during the outputting of the traffic messages.

12. (Amended) The method according to Claim 11, wherein a traffic message is output only if its local relevance factor is higher than a predefinable threshold value.

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cancel.

13. (Twice Amended) The method according to Claim 1, wherein the position of the motor vehicle is detected as a Geocode using a satellite-supported position-determining system, in particular with the GPS (Global Positioning System), and in that the positions of the traffic messages are also provided as Geocodes, with the result that the distances can be determined without further conversion calculations.

REMARKS

1. The specification has been amended to include headings for the different sections. The Abstract is amended. Claims 1-13 are amended. A marked-up version of the Abstract and the claims is attached hereto.

In accordance with 37 C.F.R. §1.121 (as amended on 11/7/2000) a marked-up version of the rewritten claims is attached hereto. The marked-up version illustrates the changes to each claim.

2. It is submitted that Saga et al. ("Saga") does not anticipate Applicant's invention under 35 U.S.C. §102(b), because Saga does not disclose or suggest each feature of Applicant's invention according to Claims 1-13.

Applicant's invention according to Claim 1 recites that the "traffic messages are output sorted." This is not disclosed or suggested by Saga. Saga describe a navigation system which receives traffic messages and displays the traffic jams or other traffic congestions on a map display to the driver. Less important traffic messages or messages outside a set range are not displayed. Besides the position of the traffic messages, the actual vehicle position is displayed too.

In detail, as described in column 2, lines 14 to 62, a map is displayed showing the area around the present position of the vehicle together with the current position thereof. Further, traffic information, i.e. information about traffic jams, traffic regulations or controls, as well as a recommended route or a route along which the vehicle is scheduled to move, are shown. In order to prevent an undue reduction of the visibility of a map on the screen, pieces of road traffic information of little importance are prevented from being displayed (cf. Column 2, lines 23 to 29). The degree of importance of a road traffic information is determined either with regard to a specified area (cf. Figure 27) or the length of a traffic jam (cf. Figure 28) or a specific route (cf. Figures 29 and 30).

However, in Saga, the traffic information will not be output in a sorted manner, i.e. traffic information will not be sorted according to distances starting with the smallest distances as suggested by the present invention, but will be output simultaneously in accordance with the capabilities of the display means used by the navigation system.

The disadvantage of the method of displaying traffic information taught by Saga is that the driver has to orientate himself/herself on the map displayed on the screen before he/she can decide about the relevance of certain traffic messages for his/her route. This means, he/she has to find his/her own vehicle's position on the displayed map to recognize the vehicle's travel direction and to identify the traffic messages on the map which are relevant for his/her route. This all causes undue distraction of the driver while driving.

In contrast, according to the present invention as recited in Claim 1, a list of traffic messages is output sorted which provides the most relevant (i.e. the nearest) traffic message on top of the list, causing much less distraction than the traffic message presentation described by Saga.

Therefore, Claim 1 and Claims 2-13 are not disclosed or suggested by Saga under 35 U.S.C. §102(b).

3. It is submitted that Claims 1-13 are not anticipated by Sumizawa under 35 U.S.C. §102(e). Sumizawa fails to disclose or suggest that the "traffic messages are output sorted according to distances, starting with the smallest distance" as recited by Applicant in Claim 1.

Sumizawa describes a navigation system which receives traffic information through a FM radio channel. The system determines if the traffic messages are relevant for the calculated route and if there is a plurality of traffic messages relevant for the route ahead of the vehicle. The distances from the current position to the locations of the traffic events triggering the traffic messages are calculated, and then a voice

report on the nearest one is issued. Thus, only traffic information about the nearest traffic event that may constitute a hindrance to travel is output by voice to the user (cf. Column 1, lines 33 to 43).

Further, when a plurality of traffic jam locations or travel control points, i.e. a plurality of traffic messages exists, a voice report may be issued on all of them. Furthermore, the announcement of traffic messages can be restricted to those related to traffic events within a specific distance from the current position. At least, when a traffic message is received for the first time, it is desirable to output this message together with the distance of the traffic jam location regardless of the distance from the current position of the traffic jam location.

Sumizawa fails to teach to output other traffic messages than the nearest relevant traffic message in a sorted manner. In case that more messages are output, they are not output in the order of the distances to vehicle but all of them or all of them being located within a predetermined distance are output as received. Applicant's invention according to claim 1 recites that "traffic messages are output sorted according to distances, starting with the smallest distance." This is not disclosed or suggested in Sumizawa. Thus, Claim 1 is not disclosed or suggested by Sumizawa.

The disadvantage of Sumizawa's invention is that the driver cannot get a clear picture about the traffic situation on his/her route. In particular, it might be possible that only a short traffic jam, which is near to him/her, is output, whereas a longer second traffic jam, which might follow the first short

traffic jam, cannot be noticed by the driver in case that only a voice report is issued on the nearest traffic jam and therefore the driver might make the wrong decision in relation to this route. Thus, Claim 1, and Claims 2-13 are not disclosed or suggested by Sumizawa under 35 U.S.C. §102(e).

4. It is submitted that Goss et al. ("Goss") does not anticipate Claims 1-13 under 35 U.S.C. §102(e). Goss fails to disclose and suggest that the "traffic messages are output sorted according to distances" as recited by Applicant in Claim 1, or that the traffic messages are displayed to the driver in a sorted manner on that the "traffic messages are transmitted to a motor vehicle, sorted there and shared" as recited in claim 3.

Goss discloses another car navigation system which is linked to a traffic message receiver. According to column 2, lines 26 to 52, traffic messages to be output are selected from received traffic messages in accordance with predefined criteria. For example, such criteria are calculated from the instantaneous position of a vehicle and from an entered destination. Furthermore, the selection of traffic messages to be output to the driver of a vehicle can be performed by comparing the distance between the traffic event causing the traffic message to the instantaneous position of the vehicle so that only those traffic messages are output for locations thereof are within the predefined distance. However, sorting received traffic messages with regard to the distances, as is claimed by Applicant, is neither disclosed nor suggested by Goss.

The Examiner's opinion that traffic messages and/or locations are output according to some kind of priority or

weight (resistance value), associated with the distances between the present location of the vehicle and the locations of the traffic (cf. Office Action, page 6, the last four lines), seems to result from misunderstanding the description of Figure 6 in columns 7 and 8. In particular, the last paragraph of column 7 is related to the decision whether or not an alternative route should be used instead of an initially designed route in the case of a traffic jam or the like on the initially designated route. For this purpose, traffic resistance values are calculated for both the initially designated and the alternative routes and if the traffic resistance value of an alternative route is smaller than that of the initially designated route, the alternative route is recommended. In this case, a voice alert is output that makes the user aware of a route change. Consequently, a later outputting of traffic messages relating to the initially designated route is being suppressed. Thus, Goss fail to disclose or to suggest outputting traffic messages in dependence on traffic resistance values as claimed by Applicant. Rather, Goss teaches to suppress outputting traffic messages relating to a route that is no longer used for route guidance. Therefore, Claim 1, and Claim 2-13 are not disclosed or suggested by Goss.

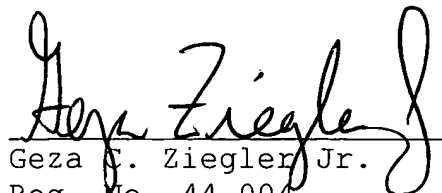
5. The other citations made of record are also related to combined navigation systems/traffic message systems. These kinds of combined systems do not really need the present invention as the system can decide, based on the calculated or designated route, which traffic messages are relevant for the driver. Consequently, the other citations also fail to disclose or to suggest the present invention.

At least it as to be noted that a driver usually does not use a navigation system for frequently used routes (e.g. from his/her home to his/her office) and consequently does not utilize the systems disclosed in the cited documents. In contrast, a driver using a traffic information system using the method according to the present invention, is always aware of important traffic information in his/her area and this information is presented to him/her in a convenient and less distracting way while driving.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$110.00 is enclosed for a one month extension of time and on account of the additional claim fees. The Commissioner is hereby authorized to charge payment for any additional fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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Date: 7/31/01

Signature: Carolina Rodriguez
Person Making Deposit

Application No.: 09/515,813

Marked Up Specification Replacement Section(s)

Abstract

[Method for outputting traffic information in a motor vehicle]

The invention relates to a method for outputting traffic information in a motor vehicle. In order to present the driver with traffic information in such a way that he can adapt his driving behaviour and/or his selection of a route for his journey to the respective current traffic situation in time, there is a provision that traffic messages are stored together with the respective position of the route section to which they relate. The positions of the traffic messages are then compared with the respective position of a motor vehicle in which the traffic information is to be output in order to detect the distances between the respective position of the traffic messages and the position of this motor vehicle. The traffic messages are then output sorted according to distances, starting with the smallest distance.

[(Figure 3)]

Marked Up Claims

1. (Amended) A method for outputting traffic information in a motor vehicle, in which

traffic messages are stored together with the respective position of the route section or point to which they relate,

the positions of the traffic messages are compared with the respective position of the motor vehicle in which the traffic information is to be output in order to determine the distances between the respective positions in the traffic messages and the position of this motor vehicle, and

the traffic messages are output sorted according to distances, starting with the smallest distances.

2. (Amended) The method according to Claim 1, [characterized in that] wherein the sorted traffic messages are transmitted to a motor vehicle.

3. (Amended) The method according to Claim 1, [characterized in that] wherein the traffic messages are transmitted to a motor vehicle, sorted there and stored.

4. (Amended) The method according to Claim 3, [characterized in that] wherein the traffic messages which are transmitted to a motor vehicle are continuously updated at predefinable time intervals.

5. (Twice Amended) The method according to Claim 1, [characterized in that] wherein only traffic messages which

relate to a selected area are stored and are subsequently output in the motor vehicle.

6. (Amended) The method according to Claim 5, [characterized in that] wherein the selected area surrounds the position of the motor vehicle in an essentially circular shape.

7. (Amended) The method according to Claim 5, [characterized in that] wherein the selected area can be defined with respect to the particular current position of the motor vehicle as a function of a planned route for a journey, surrounding it in a corridor-like fashion.

8. (Twice Amended) The method according to Claim 1, [characterized in that] wherein

each traffic message is transmitted together with an item of updating information which describes the anticipated duration of the general relevance of the respective traffic message,

the average vehicle speed is detected, logically linked to the distances assigned to the traffic messages and compared with the updating information in order to detect the specific relevance of the respective traffic message, and only traffic messages which have been assessed relevant to the respective vehicle in terms of timing are output.

9. (Amended) The method according to Claim 8, [characterized in that] wherein the updating information of the respective traffic message contains the transmission time, the anticipated duration and the detection time of the reported event.

10. (Twice Amended) The method according to Claim 1, [characterized in that] wherein:

first the direction of travel of the motor vehicle is detected,

the direction of the motor vehicle with respect to the particular position of the traffic message is detected and is compared with the direction of travel, and

the traffic messages are output sorted according to directions.

11. (Amended) The method according to Claim 10, [characterized in that] wherein a directional factor is formed for each traffic message from the direction of the motor vehicle with respect to the particular position of the traffic message and the direction of travel, which factor is combined with the distance assigned to the respective traffic message to form a local relevance factor which is taken into account during the outputting of the traffic messages.

12. (Amended) The method according to Claim 11, [characterized in that] wherein a traffic message is output only if its local relevance factor is higher than a predefinable threshold value.

13. (Twice Amended) The method according to Claim 1, [characterized in that] wherein the position of the motor vehicle is detected as a Geocode using a satellite-supported position-determining system, in particular with the GPS (Global Positioning System), and in that the positions of the traffic messages are also provided as Geocodes, with the result that the distances can be determined without further conversion calculations.